

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0060712; AI 31144; PER20060001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** Columbia Heights Sewerage District #1
P.O. Box 631
Columbia, LA 71418
- II. **PREPARED BY:** Ronda Burtch
- DATE PREPARED:** March 6, 2007
- III. **PERMIT ACTION:** reissue LPDES permit LA0060712, AI 31144; PER20060001
- LPDES application received: December 8, 2006
- LPDES permit issued: July 1, 2002
LPDES permit expired: June 30, 2007

IV. FACILITY INFORMATION:

- A. The application is for the discharge of treated sanitary wastewater from an existing publicly owned treatment works serving the Columbian Heights Sewerage District #1.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located 3/4 mile south of Hwy 165, south of Caldwell Parish High School, three miles south of Columbia, Caldwell Parish.
- D. The treatment facility consists of a four-cell oxidation pond with aerators and artificial lagoon. Disinfection is by ultraviolet light.

E. Outfall 001

Discharge Location: Latitude 32° 03' 22" North
Longitude 92° 05' 51" West

Description: treated sanitary wastewater

Design Capacity: 0.250 MGD

Type of Flow Measurement which the facility is currently using:

Continuous Recorder

V. RECEIVING WATERS:

The discharge is into Hurricane Creek, thence into Black Bayou, thence into the Ouachita River in segment 081501 of the Ouachita River Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 081501 of the Ouachita River Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment 081501	Degree of Support of Each Use						
	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Partial	Full	Full	Not Supported	N/A	N/A	N/A	N/A

^{1/}The designated uses and degree of support for Segment 081501 of the Ouachita River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 081501 of the Ouachita River Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006 from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Ronda Burtch
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 081501, Castor Creek - Headwaters to Little River, is not listed on LDEQ's Final 2004 303(d) List as impaired. However, subsegment 081501 was previously listed as impaired for organic enrichment/low DO, chlorides, and TDS, for which the below TMDLs have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving waterbodies based upon additional TMDLs and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDLs have been established for subsegment 081501:

Castor Creek Watershed TMDL for Biological Oxygen-Demand Substances

Per the TMDL, "All of the dischargers located in this watershed are small and discharge into tributaries of Castor Creek and need not be included in a model of this scale. It is unlikely that they will have an impact on the targeted waterbody due to the small load and/or the distance from the waterbody named in the 303(d) lists. They fall within one of several state or regional policies that govern permit limitations. These dischargers will be given effluent limitations according to the state policy."

Castor Creek Watershed TMDL for Chlorides and Salinity/Total Dissolved Solids (TDS)

Per the TMDL, "All point source dischargers located in this watershed are small municipal or industrial wastewater facilities that discharge into tributaries of Castor Creek. Currently none of these facilities have permit limits for chlorides or TDS. Point source dischargers contribute, on average, less than one percent of the harmonic mean flow. With such a miniscule portion of the overall flow being contributed by point sources it can be surmised that the wastewater dischargers in the watershed have no real impact on the overall loading of chlorides and TDS to Castor Creek. Since point sources do not represent a significant source of chloride or TDS, these TMDLs only address the non-point source contribution of chloride and TDS." Therefore, no limitations for chlorides and TDS will be included in this permit.

Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
BOD ₅	20.85	10 mg/l	15 mg/l	Limits are set in accordance with the Statewide Sanitary Effluent Limitations Policy (SSELP) for facilities of this treatment type and size that are not included in the original Ouachita River Basin Plan.
TSS	31.28	15 mg/l	23 mg/l	Limits are set in accordance with the Statewide Sanitary Effluent Limitations Policy (SSELP) for facilities of this treatment type and size that are not included in the original Ouachita River Basin Plan.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1, POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C, the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0060712: Issued: July 1, 2002
Expired: June 30, 2007

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
BOD ₅	10 mg/l	15 mg/l	2/month	Grab
TSS	15 mg/l	23 mg/l	2/month	Grab
Fecal Coliform Colonies	200	400	2/month	Grab

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following inspections were performed during the period beginning February 26, 2005 and ending February 26, 2007 for this facility.

Date: June 30, 2005

Inspector: LDEQ

Findings and/or Violations:

1. Facility is under enforcement action WE-P-02-0898.
2. The facility is currently under construction as required by the action.
3. There were a few excursions for TSS (5/05, 4/05, 3/05, 11/04, & 5/04) since last inspection. Also, fecal coliform was exceeded on 4/05.

Date: April 25, 2006

Inspector: LDEQ

Findings and/or Violations:

1. The collection system is by gravity flow with lift stations. The treatment is by a four cell oxidation pond, a lagoon (shallow) divided into three cells, with disinfection by UV. The effluent is discharged by gravity flow and equipped with an emergency pumping station. Changes of local indirect discharges / residential / industrial facilities, due to the Highway 165 construction will be addressed / updated in the new application which is due 180 days prior to the expiration of the permit on 06/30/2007. The permit limitations (specifically Appendix A) were applied until 12/31/2005; whereas, the respondent (of settlement) was required to continue with all other provisions of the LPDES permit.
2. The inspection revealed the following areas of concern:
 - a. The design capacity of 0.25 MGD was exceeded for the months and years of 09/05 (MM/YY), 11/05, 12/05, 01/06, 02/06, and 03/06.
 - b. The BOD5 permit requirement was exceeded for the months and years of 06/05, 07/05, 10/05, 11/05, 12/05, and 03/06.
 - c. The TSS permit requirement was exceeded for the months and years of 06/05, 07/05, 08/05, 09/05, 10/05, 11/05, 12/05, and 03/06.
 - d. The fecal coliform permit requirement was exceeded for the months and year of 06/05 and 10/05.
 - e. The sample measurement data on the DMRs for the concentration averages were inconsistent with the sample analysis results; whereas, the concentration averages were not being flow weighted (see Part III, Section F.16, 03/06 DMR and flow / sample analysis reports).
 - f. The pH calibration / maintenance records were not presented or revealed.
 - g. There were no Standard Operating Procedures and schedules presented or revealed.
 - h. The Flow % error / flow measurement could not be obtained due to the turbulence at the flow measurement point.
 - i. Flow % error calibration checks / records, to assure continued compliance, were not present or revealed.

Date: January 19, 2007

Inspector: LDEQ

Findings and/or Violations:

1. This inspection was conducted in response to a citizen's complaint. The description of the complaint stated that, "sewage from [a] manhole was getting into her yard."
2. The site was inspected on 01/19/07 at 1:00 PM. I spoke to both Ms. Beverly Brown at 223 Collins Road, and Ms. Jean Cleveland at 209 Collins Road. Ms. Brown and Ms. Cleveland both stated that numerous discharges had occurred at the manhole located at 223 Collins Road. They both stated that no containment / cleanup / disinfectant were ever observed being applied. I met with Monty Adams, Sect.-Treas., of the Caldwell Parish Police Jury. I requested that the facility / operator be promptly notified and the area be cleaned and disinfected immediately. I met with Mr. Ralph Bird, Operator, on 01/22/07 at 2:00 PM. The approximate amount of discharge was unknown. No disinfectant had been applied, as stated by Mr. Bird.
3. The inspection revealed the following areas of concern:
 - a. There was an unauthorized discharge of sewage from a manhole located at 223 Collins Road, Caldwell Parish.
 - b. The incident / unauthorized discharge was not reported to the SPOC by the facility.

B) Compliance and/or Administrative Orders

A review of the files indicates that there are no recent enforcement actions administered against this facility.

C) DMR Review

A review of the discharge monitoring reports for the period beginning January 1, 2005 through December 31, 2006 has revealed the following violations:

Month	Parameter	DMR Reported Value	Permit Limit
February 2005	BOD ₅ , Monthly Loading	24.03 lbs/day	20.85 lbs/day
	TSS, Monthly Loading	39.03 lbs/day	31.28 lbs/day
March 2005	TSS, Monthly Loading	71.02 lbs/day	31.28 lbs/day
	TSS, Monthly Avg.	38.50 mg/l	15 mg/l
	TSS, Weekly Avg.	50 mg/l	23 mg/l
April 2005	BOD ₅ , Monthly Loading	29.1 lbs/day	20.85 lbs/day
	Fecal Coliform, Monthly Avg.	404 col/100 ml	200 col/100 ml
	Fecal Coliform, Weekly Avg.	568 col/100 ml	400 col/100 ml
	TSS, Monthly Loading	105.47 lbs/day	31.28 lbs/day
	TSS, Monthly Avg.	57.25 mg/l	15 mg/l
May 2005	TSS, Weekly Avg.	58 mg/l	23 mg/l
	TSS, Monthly Loading	47.17 lbs/day	31.28 lbs/day
	TSS, Monthly Avg.	55.75 mg/l	15 mg/l
June 2005	TSS, Weekly Avg.	57.5 mg/l	23 mg/l
	BOD ₅ , Monthly Loading	21.77 lbs/day	20.85 lbs/day
	Fecal Coliform, Weekly Avg.	1,328 col/100 ml	400 col/100 ml
July 2005	TSS, Monthly Loading	45.33 lbs/day	31.28 lbs/day
	TSS, Monthly Avg.	42.25 mg/l	15 mg/l
	BOD ₅ , Monthly Loading	22.52 lbs/day	20.85 lbs/day
August 2005	TSS, Monthly Loading	42.33 lbs/day	31.28 lbs/day
	TSS, Monthly Avg.	50.75 mg/l	15 mg/l
	TSS, Weekly Avg.	60.5 mg/l	23 mg/l
September 2005	TSS, Monthly Loading	40.45 lbs/day	31.28 lbs/day
	TSS, Monthly Avg.	48.5 mg/l	15 mg/l
	TSS, Weekly Avg.	53.5 mg/l	23 mg/l
October 2005	TSS, Monthly Loading	114.03 lbs/day	31.28 lbs/day
	TSS, Monthly Avg.	58.5 mg/l	15 mg/l
	TSS, Weekly Avg.	70 mg/l	23 mg/l

October 2005	BOD ₅ , Monthly Loading Fecal Coliform, Monthly Avg. Fecal Coliform, Weekly Avg. TSS, Monthly Loading TSS, Monthly Avg. TSS, Weekly Avg.	21.28 lbs/day 282 col/100 ml 866 col/100 ml 52.79 lbs/day 51 mg/l 59 mg/l	20.85 lbs/day 200 col/100 ml 400 col/100 ml 31.28 lbs/day 15 mg/l 23 mg/l
November 2005	BOD ₅ , Monthly Loading TSS, Monthly Loading TSS, Monthly Avg. TSS, Weekly Avg.	33.64 lbs/day 76.94 lbs/day 43.75 mg/l 44.5 mg/l	20.85 lbs/day 31.28 lbs/day 15 mg/l 23 mg/l
December 2005	BOD ₅ , Monthly Loading TSS, Monthly Loading	24.83 lbs/day 48.23 lbs/day	20.85 lbs/day 31.28 lbs/day
March 2006	BOD ₅ , Monthly Avg. BOD ₅ , Weekly Avg. TSS, Monthly Avg.	11.16 mg/l 15.7 mg/l 20.5 mg/l	10 mg/l 15 mg/l 15 mg/l
April 2006	BOD ₅ , Monthly Avg. BOD ₅ , Weekly Avg. TSS, Monthly Loading TSS, Monthly Avg. TSS, Weekly Avg.	27.91 mg/l 30.90 mg/l 34.34 lbs/day 46.55 mg/l 54 mg/l	10 mg/l 15 mg/l 31.28 lbs/day 15 mg/l 23 mg/l
May 2006	BOD ₅ , Monthly Avg. BOD ₅ , Weekly Avg. TSS, Monthly Loading TSS, Monthly Avg. TSS, Weekly Avg.	14.3 mg/l 17.9 mg/l 39.94 lbs/day 32 mg/l 43 mg/l	10 mg/l 15 mg/l 31.28 lbs/day 15 mg/l 23 mg/l
June 2006	TSS, Monthly Avg.	19.25 mg/l	15 mg/l
July 2006	BOD ₅ , Monthly Avg. BOD ₅ , Weekly Avg. TSS, Monthly Avg. TSS, Weekly Avg.	14.79 mg/l 16.45 mg/l 38 mg/l 48 mg/l	10 mg/l 15 mg/l 15 mg/l 23 mg/l
August 2006	BOD ₅ , Monthly Avg. BOD ₅ , Weekly Avg. TSS, Monthly Avg. TSS, Weekly Avg.	17.03 mg/l 23.8 mg/l 49.75 mg/l 60 mg/l	10 mg/l 15 mg/l 15 mg/l 23 mg/l
September 2006	BOD ₅ , Monthly Avg. BOD ₅ , Weekly Avg. Fecal Coliform, Weekly Avg. TSS, Monthly Loading TSS, Monthly Avg. TSS, Weekly Avg.	27.3 mg/l 34.5 mg/l 1,152 col/100 ml 38.38 lbs/day 59.5 mg/l 64 mg/l	10 mg/l 15 mg/l 400 col/100 ml 31.28 lbs/day 15 mg/l 23 mg/l
October 2006	BOD ₅ , Monthly Avg. BOD ₅ , Weekly Avg. Fecal Coliform, Weekly Avg. TSS, Monthly Loading TSS, Monthly Avg. TSS, Weekly Avg.	15.18 mg/l 20.9 mg/l 447 col/100 ml 68.59 lbs/day 52 mg/l 56 mg/l	10 mg/l 15 mg/l 400 col/100 ml 31.28 lbs/day 15 mg/l 23 mg/l
November 2006	TSS, Monthly Avg. TSS, Weekly Avg.	28 mg/l 28 mg/l	15 mg/l 23 mg/l

XII. ADDITIONAL INFORMATION:

The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to

upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.250 MGD.

Effluent loadings are calculated using the following example:

$$\text{BOD: } 8.34 \text{ lb/gal} \times 0.250 \text{ MGD} \times 10 \text{ mg/l} = 20.85 \text{ lb/day}$$

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.10 and 0.50 MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Recorder
BOD ₅	2/month	Grab
Total Suspended Solids	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, general pretreatment language will be used due to the lack of either an approved or required pretreatment program.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Columbia Heights Sewerage District #1, December 8, 2006.